

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1	"5,159,223".pn.	US-PGPUB; USPAT	OR	ON	2006/02/07 08:51
S2	758	310/317.ccls.	US-PGPUB; USPAT	OR	ON	2006/02/03 14:27
S4	1	"20050281546".pn.	US-PGPUB; USPAT	OR	ON	2006/02/03 15:17
S5	32043	voltage adj controlled adj oscillator or VCO	US-PGPUB; USPAT	OR	ON	2006/02/03 15:18
S6	113	resonance adj converter	US-PGPUB; USPAT	OR	ON	2006/02/03 15:18
S7	104632	piezo\$1electric\$1 or piezo adj electric or piezo\$	US-PGPUB; USPAT	OR	ON	2006/02/03 15:19
S8	38200	phase near2 compar\$	US-PGPUB; USPAT	OR	ON	2006/02/03 15:19
S9	2	S5 and S6 and S7 and S8	US-PGPUB; USPAT	OR	ON	2006/02/03 15:21
S10	724	S5 and S7 and S8	US-PGPUB; USPAT	OR	ON	2006/02/03 15:21
S12	260860	start\$3 with control\$3	US-PGPUB; USPAT	OR	ON	2006/02/06 08:31
S13	32043	voltage adj controlled adj oscillator or VCO	US-PGPUB; USPAT	OR	ON	2006/02/06 08:31
S14	104632	piezo\$1electric\$1 or piezo adj electric or piezo\$	US-PGPUB; USPAT	OR	ON	2006/02/06 08:31
S15	38200	phase near2 compar\$	US-PGPUB; USPAT	OR	ON	2006/02/06 08:31
S16	724	S13 and S14 and S15	US-PGPUB; USPAT	OR	ON	2006/02/06 08:31
S17	239	S16 and S12	US-PGPUB; USPAT	OR	ON	2006/02/06 08:31
S18	37	("4175242"   "4275363"   "4277758"   "4510411"   "4551690"   "4554477"   "4562413"   "4626728"   "4641053"   "4658172"   "4689515"   "4692649"   "4703213"   "4713571").PN. OR ("4853579"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/06 09:02
S19	34	("4275363"   "4587958"   "4724401"   "4754186"   "4879528").PN. OR ("4965532").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/06 09:08
S20	8	("5705879"   "6013969"   "6075325"   "6087757").PN. OR ("6433458"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/06 09:13

## EAST Search History

S21	5	("3293456"   "5739724"   "5808396"   "6161418").PN. OR ("6630768").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/06 09:14
S22	26	("4703213").PN. OR ("4879528").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/06 09:15
S23	13	("4713571"   "4794294"   "4833358"   "4879528"   "5013982"   "5113116"   "5130619"   "5159223"   "5233274"   "5508579"   "5563478"   "5588592"   "6005328").PN. OR ("6396192").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/06 10:36
S24	5234	(square adj wave) with (sine adj wave)	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/06 10:37
S25	5	S17 and S24	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/06 10:37
S28	968	S13 and S14 and counter	US-PGPUB; USPAT	OR	ON	2006/02/06 10:56
S29	3	S13 and S14 and (counter with (phase adj delay))	US-PGPUB; USPAT	OR	ON	2006/02/06 11:05
S30	19	S14 and (counter with (phase adj delay))	US-PGPUB; USPAT	OR	ON	2006/02/06 14:42
S31	122	S15 and (counter with (phase adj delay))	US-PGPUB; USPAT	OR	ON	2006/02/06 14:35
S32	33	(US-20020005678-\$ or US-20020171410-\$ or US-20030045887-\$ or US-20050281546-\$).did. or (US-4056761-\$ or US-4689515-\$ or US-4833358-\$ or US-4853579-\$ or US-4864547-\$ or US-4879528-\$ or US-4965532-\$ or US-4990835-\$ or US-5210454-\$ or US-5563464-\$ or US-5563478-\$ or US-5595330-\$ or US-5661359-\$ or US-5734236-\$ or US-5744721-\$ or US-5777444-\$ or US-5816476-\$ or US-5877657-\$ or US-5955819-\$ or US-6049156-\$ or US-6064244-\$ or US-6133900-\$ or US-6396192-\$ or US-6433458-\$ or US-6569109-\$ or US-6630768-\$). did. or (US-6661154-\$ or US-6841919-\$ or US-6965188-\$). did.	US-PGPUB; USPAT	OR	ON	2006/02/06 12:37
S33	17	S32 and counter	US-PGPUB; USPAT	OR	ON	2006/02/06 13:04

## EAST Search History

S34	116379	time\$1delay or time adj delay	US-PGPUB; USPAT	OR	ON	2006/02/06 13:04
S35	8166	(time\$1delay or time adj delay) with adjust\$	US-PGPUB; USPAT	OR	ON	2006/02/06 13:05
S36	32043	voltage adj controlled adj oscillator or VCO	US-PGPUB; USPAT	OR	ON	2006/02/06 13:05
S37	104632	piezo\$1electric\$1 or piezo adj electric or piezo\$	US-PGPUB; USPAT	OR	ON	2006/02/06 13:05
S38	38200	phase near2 compar\$	US-PGPUB; USPAT	OR	ON	2006/02/06 13:05
S39	724	S36 and S37 and S38	US-PGPUB; USPAT	OR	ON	2006/02/06 13:05
S40	10	S39 and S35	US-PGPUB; USPAT	OR	ON	2006/02/06 13:07
S41	15	S36 and S37 and S35	US-PGPUB; USPAT	OR	ON	2006/02/06 13:08
S42	476	S37 and S35	US-PGPUB; USPAT	OR	ON	2006/02/06 13:29
S43	421	S36 and S35	US-PGPUB; USPAT	OR	ON	2006/02/06 13:29
S44	38200	phase near2 compar\$	US-PGPUB; USPAT	OR	ON	2006/02/06 14:35
S45	145	S44 and (counter with (phase adj angle))	US-PGPUB; USPAT	OR	ON	2006/02/06 14:35
S46	104632	piezo\$1electric\$1 or piezo adj electric or piezo\$	US-PGPUB; USPAT	OR	ON	2006/02/06 14:42
S47	31	S46 and (counter with (phase adj angle))	US-PGPUB; USPAT	OR	ON	2006/02/06 15:29
S48	160	S46 and (counter with (time adj delay))	US-PGPUB; USPAT	OR	ON	2006/02/06 15:48
S49	275	S44 and (counter with (time adj delay))	US-PGPUB; USPAT	OR	ON	2006/02/06 15:48
S50	1	"01209967".pn.	JPO	OR	ON	2006/02/07 08:52
S51	946	310/317.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 08:08
S52	695	310/318.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 13:16

## EAST Search History

S53	157707	(vari\$4 vary\$3 chang\$5 adjust\$4) with (phase time) with (delay offset shift)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 13:20
S54	250161	piezo\$	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 13:19
S55	7496	S53 and S54	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 13:19
S56	2826515	start\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 13:20
S57	3461	S55 and S56	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 13:20
S58	73077	(vari\$4 vary\$3 chang\$5 adjust\$4) near4 (phase time) near4 (delay offset shift)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/29 08:51
S59	4125	S54 and S58	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 13:21
S60	1905	S56 and S59	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 13:25

## EAST Search History

S61	1118	S59 and motor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 13:33
S62	1547947	starting start-up (start adj up)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 13:33
S63	1048	S59 and S62	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 15:05
S64	642	S63 not S61	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 15:06
S65	33501	voltage adj controlled adj oscillator or VCO	US-PGPUB; USPAT	OR	ON	2006/06/28 16:07
S66	110567	piezo\$1electric\$1 or piezo adj electric or piezo\$	US-PGPUB; USPAT	OR	ON	2006/06/28 16:07
S67	39836	phase near2 compar\$	US-PGPUB; USPAT	OR	ON	2006/06/28 16:07
S68	753	S65 and S66 and S67	US-PGPUB; USPAT	OR	ON	2006/06/28 16:07
S69	37	("4175242"   "4275363"   "4277758"   "4510411"   "4551690"   "4554477"   "4562413"   "4626728"   "4641053"   "4658172"   "4689515"   "4692649"   "4703213"   "4713571").PN. OR ("4853579"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/28 16:16
S70	34	("4275363"   "4587958"   "4724401"   "4754186"   "4879528").PN. OR ("4965532").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/28 16:16
S71	8	("5705879"   "6013969"   "6075325"   "6087757").PN. OR ("6433458"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/28 16:17
S72	5	("3293456"   "5739724"   "5808396"   "6161418").PN. OR ("6630768"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/28 16:17

## EAST Search History

S73	26	("4703213").PN. OR ("4879528"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/28 16:17
S74	13	("4713571"   "4794294"   "4833358"   "4879528"   "5013982"   "5113116"   "5130619"   "5159223"   "5233274"   "5508579"   "5563478"   "5588592"   "6005328").PN. OR ("6396192"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/28 16:17
S75	3	S65 and S66 and (counter with (phase adj delay))	US-PGPUB; USPAT	OR	ON	2006/06/28 16:17
S76	123	S67 and (counter with (phase adj delay))	US-PGPUB; USPAT	OR	ON	2006/06/28 16:17
S77	8459	(time\$1delay or time adj delay) with adjust\$	US-PGPUB; USPAT	OR	ON	2006/06/28 16:18
S78	110567	piezo\$1electric\$1 or piezo adj electric or piezo\$	US-PGPUB; USPAT	OR	ON	2006/06/28 16:18
S79	500	S78 and S77	US-PGPUB; USPAT	OR	ON	2006/06/28 16:20
S81	33501	voltage adj controlled adj oscillator or VCO	US-PGPUB; USPAT	OR	ON	2006/06/28 16:22
S82	438	S81 and S77	US-PGPUB; USPAT	OR	ON	2006/06/28 16:22
S83	110567	piezo\$1electric\$1 or piezo adj electric or piezo\$	US-PGPUB; USPAT	OR	ON	2006/06/28 16:23
S84	31	S83 and (counter with (phase adj angle))	US-PGPUB; USPAT	OR	ON	2006/06/28 16:23
S85	161	S83 and (counter with (time adj delay))	US-PGPUB; USPAT	OR	ON	2006/06/28 16:24
S86	39836	phase near2 compar\$	US-PGPUB; USPAT	OR	ON	2006/06/28 16:24
S87	281	S86 and (counter with (time adj delay))	US-PGPUB; USPAT	OR	ON	2006/06/28 16:24
S88	126121	((phase time) near3 (delay\$3 shift\$3 offset\$4)) with (adjust\$4 chang\$4 variable vary\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 16:56
S89	250161	piezo\$	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 16:56

## EAST Search History

S90	6393	S88 and S89	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 16:57
S91	61018	phase near3 angle	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/28 16:58
S92	941	S90 and S91	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/29 08:13
S93	6029	((phase near3 difference) with voltage with current)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/29 08:13
S94	250398	piezo\$	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/29 08:13
S95	394	S94 and S93	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/29 08:14
S96	26097	((phase time) with (delay offset shift difference)) with voltage with current	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/29 08:54
S97	924	S94 and S96	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/29 08:54

## EAST Search History

S98	530	S97 not S95	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/29 08:55
S99	824	310/317.ccls.	US-PGPUB; USPAT	OR	ON	2006/12/11 13:25
S10 0	705	310/318.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/11 13:25
S10 1	858	310/317.ccls.	US-PGPUB; USPAT	OR	ON	2007/04/18 17:10
S10 2	709	310/318.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/04/18 17:10